Robert P. Marande  
Dean, College of Science and Technology  
Bloomsburg University of Pennsylvania  
Room 176 Hartline Science Center  
400 East Second Street  
Bloomsburg, PA 17815

Dear Dr. Marande:

Applied Science Accreditation Commission (ASAC) of ABET recently held its 2010 Summer Meeting to act on the program evaluations conducted during 2009-2010. Each evaluation was summarized in a report to the Commission and was considered by the full Commission before a vote was taken on the accreditation action. The results of the evaluation for Bloomsburg University of Pennsylvania are included in the enclosed Summary of Accreditation Actions. The Final Statement to your institution that discusses the findings on which each action was based is also enclosed.

The policy of ABET is to grant accreditation for a limited number of years, not to exceed six, in all cases. The period of accreditation is not an indication of program quality. Any restriction of the period of accreditation is based upon conditions indicating that compliance with the applicable accreditation criteria must be strengthened. Continuation of accreditation beyond the time specified requires a reevaluation of the program at the request of the institution as noted in the accreditation action. ABET policy prohibits public disclosure of the period for which a program is accredited. For further guidance concerning the public release of accreditation information, please refer to Section II.L. of the 2009-2010 Accreditation Policy and Procedure Manual (available at www.abet.org).

A list of accredited programs is published annually by ABET. Information about ABET accredited programs at your institution will be listed in the forthcoming ABET Accreditation Yearbook and on the ABET web site (www.abet.org).

Leadership and Quality Assurance in Applied Science, Computing, Engineering, and Technology Education
It is the obligation of the officer responsible for ABET accredited programs at your institution to notify ABET of any significant changes in program title, personnel, curriculum, or other factors which could affect the accreditation status of a program during the period of accreditation.

Please note that appeals are allowed only in the case of Not to Accredit actions. Also, such appeals may be based only on the conditions stated in Section II.G. of the 2009-2010 Accreditation Policy and Procedure Manual (available at www.abet.org).

Sincerely,

[Signature]

Charles Wallace McGlothlin, Jr., Chair
Applied Science Accreditation Commission

Enclosure: Summary of Accreditation Action
Final Statement

cc: David L. Soltz, President
David R. Simpson, Associate Professor, Physics/Engineering Technology
Mark Rudin, Report Team Chair
July 26, 2010

David L. Soltz
President
Bloomsburg University of Pennsylvania
Office of the President Carver Hall
400 E. Second Street
Bloomsburg, PA 17815-1301

Dear Dr. Soltz:

I am pleased to transmit to you the findings of the Applied Science Accreditation Commission (ASAC) of ABET with respect to the evaluation conducted for Bloomsburg University of Pennsylvania during 2009-2010. Each of ABET’s Commissions is fully authorized to take the actions described in the accompanying letter under the policies of the ABET Board of Directors.

We are pleased that your institution has elected to participate in this accreditation process. This process, which is conducted by approximately 1,500 ABET volunteers from the professional community, is designed to advance and assure the quality of professional education. We look forward to our continuing shared efforts toward this common goal.

Sincerely,

David K. Holger
President

Enclosure: Commission letter and attachments

Leadership and Quality Assurance in Applied Science, Computing, Engineering, and Technology Education
ABET, Inc.

Applied Science Accreditation Commission
Summary of Accreditation Actions
for the
2009-2010 Accreditation Cycle

Bloomsburg University of Pennsylvania
Bloomsburg, PA

Health Physics (B.S.)

Accredit to September 30, 2012. A request to ABET by January 31, 2011 will be required
to initiate a reaccreditation evaluation visit. In preparation for the visit, a Self-Study
Report must be submitted to ABET by July 01, 2011. The reaccreditation evaluation will
be a comprehensive general review.
ABET, Inc.
APPLIED SCIENCE ACCREDITATION COMMISSION

BLOOMSBURG UNIVERSITY OF PENNSYLVANIA
Bloomsburg, Pennsylvania

FINAL STATEMENT
Evaluation under the Applied Science Criteria
And Accreditation Policy and Procedures 2005-2006
Visit Dates: November 6-8, 2005
1st Interim Report Submitted: September 2007
2nd Interim Report Submitted: July 2009

Introduction

The Applied Science Accreditation Commission (ASAC) of ABET, Inc. has evaluated the baccalaureate-level health physics program at Bloomsburg University. This program was initially visited in September 2005 as part of a 2005-2006 general ASAC review, resulting in an interim report submitted September 2007. The final statement resulting from that report required a second interim report with respect to weaknesses identified in the program. This statement is a result of the review of the Interim Report dated July 1, 2009.

ABET’s accreditation action is based upon the findings summarized in this statement. Actions will be dependent on the program’s range of compliance or non-compliance with the criteria. This range can be construed from the following wording:

- Deficiency: A deficiency indicates that a criterion, policy, or procedure is not satisfied. Therefore, the program is not in compliance with the criterion, policy, or procedure.

- Weakness: A weakness indicates that a program lacks the strength of compliance with a criterion, policy, or procedure to ensure that the quality of the program will not be compromised. Therefore, remedial action is required to strengthen compliance with the criterion, policy, or procedure prior to the next evaluation.
• Concern: A concern indicates that, while a criterion, policy or procedure is currently satisfied, the potential exists for this situation to change in the near future, such that the cited criterion, policy or procedure may no longer be satisfied.

• Observation: An observation is a comment or suggestion which does not relate directly to the criteria being used for evaluation but is offered to assist the institution in its continuing efforts to improve its programs.
Health Physics Program

Evaluated under the ASAC Program Criteria for Health Physics And Similarly Named Applied Science Programs

Summary of Pertinent Sections from the Previous Final Statements

The pertinent sections from the Final Statements issued from both the 2005-2006 general ASAC review and the 2007 Interim Report are shown below.

Program Weaknesses

Four weaknesses were cited during the 2005-2006 general review:

1. Criterion 2, Program Educational Objectives: ABET Criterion 2 states that, "The applied science program for which an institution seeks accreditation or reaccreditation must have in place: (b) a process based on the needs of the program’s various constituencies in which the objectives are determined and periodically evaluated."

Based on the review of the self-study and the on-site visit, the process that identifies program constituencies and involves them in the periodic determination and evaluation of the program educational objectives appears informal and not well documented.

- **Due Process Response**: The Institution is still implementing the periodic reviews of the objectives that will be conducted by the health physics staff as part of their annual review of the program. The annual review will be completed at the end of each academic year. The review will include a better summary of any surveys conducted during the year, a summary of placement of graduates, current program objectives and any other issues that could impact and/or improve the program. The annual review for this academic year will be made available at the next Technical Advisory Committee meeting in May 2006 and a copy will be sent to ABET for review.

- The weakness remains.
Review of the 2007 Interim Report and Conclusions

The program has provided evidence of an active and productive Technical Advisory Committee which includes members of several constituencies, including members from each of the major health physics employers' areas (nuclear power, state agencies, academic, and the medical community), alumni, and faculty. This group has been involved with the determination and evaluation of program educational objectives, with documentation provided. Some stated constituencies, such as current students, the Bloomsburg Administration, and professional health physics societies and individuals, however, have less than clearly defined procedures as to how their input on program objectives are gathered, analyzed, and used in the assessment process.

Therefore, while there appears to be significant progress with respect to compliance with this criterion, the procedures and processes are incomplete and not fully implemented.

- The weakness remains.
- Due process response: The program provided additional information which included regular program input from the Dean of the College of Science and Technology, but acknowledged more formal documentation, including resolution of issues, must be maintained. Additionally, the program provided some evidence of input from radiation safety officers and other health physics professionals regarding what employers are looking for in hiring new undergraduates for health physics positions; these materials were discussed by the Technical Advisory Committee. This resulted in a change to a course in Radiation Biology where more stringent requirements were developed for written and oral presentations.

Another student input form was also developed for providing more focused data for evaluating program objectives and outcomes. The program should be cautioned, however, to state the outcomes and objectives being measured consistently with those published and provided to the students.

Therefore, while there appears to be significant progress with respect to compliance with this criterion, the procedures have not been fully implemented and appropriately documented.
• The weakness remains.

2. **Criterion 2, Program Educational Objectives:** ABET Criterion 2 states that, "The applied science program for which an institution seeks accreditation or reaccreditation must have in place: (c) a curriculum and processes that ensure the achievement of these objectives and, (d) a system of ongoing evaluation that demonstrates achievement of these objectives and uses the results to improve the effectiveness of the program."

• **Due Process Response:** The Institution has indicated that they made significant progress through their Technical Advisory Committee toward including members from each of the major health physics employers’ areas (nuclear power, State agencies, academic, and the medical community). In addition, an exit interview process has been put in place to interview the new graduates and determine if the program had met their goals. The program has also conducted additional alumni surveys that will be repeated every 2-3 years to determine professional and career development of its graduates. This information will be used by the Health Physics staff and the Technical Advisory Committee to update and evaluate the program objective on a regular basis.

• The weakness remains.

**Review of the 2007 Interim Report and Conclusions**

The program has published educational objectives consistent with the mission of the institution and ABET criteria. The program has also specified the processes and timing of data collection from several, but not all, of their constituencies, which will allow periodic evaluation of program objectives. Documentation was provided which indicated that procedures are in place and are being used to periodically evaluate the curriculum and make changes when necessary to improve it. However, the processes have not been in place long enough to allow feedback to ensure the changes made were positive. Also, because many of the evaluation and assessment processes are informal, not clearly specified as to how they are done, or do not specify what “trigger thresholds” indicate that changes are needed, the effectiveness is uncertain.
• **Due Process Response:** The program states that low graduation rates have not allowed significant sample sizes for the outcomes assessment process, but with the expected higher enrollment and graduation rates, more detailed procedures are being developed.

Therefore, progress appears to continue, but the program has not demonstrated that the assessment cycle has been completed.

• The weakness remains.

3. **Criterion 3, Program Outcomes and Assessments:** ABET Criterion 3 states that "Each program must have an assessment process with documented results. Evidence must be given that the results are applied to the further development and improvement of the program. The assessment process must demonstrate that the outcomes important to the mission of the institution and the objectives of the program, including those listed above, are being measured. Evidence that may be used includes, but is not limited to, the following: student portfolios, including graded assignments, and/or projects, nationally-normed subject content examinations, alumni surveys that document professional accomplishments and career development activities, placement data of graduates, and employer surveys."

• **Due process response:** The Institution agrees that additional documentation needs to be in place to clearly provide evidence of a continuous improvement process. The survey that was conducted after the ABET visit will be included in the May 2006 annual review and will be sent to ABET for review as soon as it is complete.

• The weakness remains.

*Review of the 2007 Interim Report and Conclusions*

Evidence submitted by the program indicates that a viable plan appears to be in place, and some data has been collected. Also some evidence was provided to indicate some of the data, for example, part of the results of the Alumni Survey, were used for improvement of the program. Nevertheless, there is little evidence of the data collected from students or of the use, if any, of the results. Comments from students in evaluating courses each semester and exit interviews of graduating seniors are discussed, but no documentation is provided as to what, if anything, has
been discussed or changed with respect to these data. (One potential future change mentioned concerns a difficulty with the Chemistry requirement.) Also, there is no evidence of the use of, or comments concerning, some of the data collected from the Alumni Survey (i.e., Questions 12-15). Therefore, the program has not presented evidence showing that the outcomes and associated assessment processes are fully implemented and utilized to show how the assessment data is used to update course materials and develop new subject matter.

- **Due process response:** The program in its response provided significant data addressing each of the areas discussed above in the Review of the Interim Report, which appear would satisfy the requirement of having an assessment process in place and evolving. What is not present, however, is documentation which provided evidence that this is the case. The program also recognizes the need to improve its documentation process.

- **The weakness remains.**

4. **Criterion 1. Students. ABET Criterion 1:** states that, "The institution must evaluate, advise and monitor students to determine its success in meeting program objectives. The institution must have and enforce policies for the validation of courses taken. The institution must also have and enforce procedures to assure that all students meet all program requirements."

- **Due process response:** The Institution is working on improving the forms to be used to track students through the program. During the review of this finding by the Institution, they determined that the program had been unnecessarily prescriptive in its requirements and had not allowed for flexibility in courses outside health physics for students desiring to concentrate on a particular aspect of health physics. These issues will be discussed at the next Technical Advisory Committee meeting and will then be sent to ABET for review by the Commission.

- **The weakness remains.**

**Review of the 2007 Interim Report and Conclusions**

Changes were made in the program pre-requisite requirements as well as course requirements and were approved by the Bloomsburg University Curriculum Committee. Additionally, the form
used to track students’ progress through the curriculum has been updated, and is reviewed by each student and faculty advisor each semester prior to registering for classes. To ensure that this process occurs, a hold is placed on the student’s registration and can only be removed by the advisor or Physics Department staff. Also an example and documentation of an approved course substitution was provided to demonstrate how this process operates. These exceptions are reviewed by the Health Physics Coordinator and then the Department Chair, and the request and approval are then documented to verify the approval.

Finally, to verify that the student has met all graduation requirements, the Department Chair reviews all coursework near the end of the student’s career as a final check.

- The weakness has been resolved.

Results of the 2009 Interim Report and Conclusions

The July 1, 2009 Interim Report provides documentation of measures taken to address the remaining two weaknesses for Criterion 2, Program Educational Objectives. The program has initiated a comprehensive course evaluation process in an effort to gather input from students on the degree of success in achieving its program educational objectives. Specifically, students are now requested to complete both traditional course evaluations at the end of each semester as well as mid-semester course evaluations in a number of select health physics courses. The mid-semester evaluation has been implemented to solicit feedback from students that could be utilized by faculty to effect change while a course was in progress. Program faculty have provided examples of cases in which the information collected from these evaluations has been assessed and steps have been taken to improve student learning.

The Program Coordinator continues to hold regularly scheduled meetings with the Dean of Science and Technology on a monthly basis during the academic semesters to ensure his input is included as part of the overall assessment of the program’s educational objectives. The program provided evidence that the minutes of these meetings are now kept by the Program Coordinator to document the subjects discussed and ensure that action items are consistently tracked. The program has also provided documentation on how input from members of their Technical
Advisory Board and other health physics professionals in the region are gathered, analyzed, and used in the assessment of their program educational objectives.

- This criterion is satisfied: the two weaknesses are resolved.

The July 1, 2009 Interim Report also provides documentation of measures taken to address the remaining weakness for **Criterion 3. Program Outcomes and Assessment**. The program has implemented a comprehensive course evaluation process mentioned above on a formal basis that addresses the extent to which the objectives/outcomes of each course have been met. A formal review process has also been established to review these assessments and take action, if appropriate. Additionally, a formalized exit interview process for graduating seniors that assesses the achievement of their program educational objectives and programs outcomes has now been instituted.

- The criterion is satisfied; the weakness is resolved.